N.D. Supreme Court

Stein v. Ohlhauser, 211 N.W.2d 737 (N.D. 1973)

Filed Oct. 23, 1973

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IN THE SUPREME COURT

STATE OF NORTH DAKOTA

Sharon K. Stein, Plaintiff and Appellee
v.
Wilbert F. Ohlhauser, Defendant and Appellant

Civil No. 8907

[211 N.W.2d 738]

Syllabus of the Court

1. In order to establish a foundation for expert testimony, a showing must be made that the subject matter is one where expert testimony is accepted by the scientific community and the courts and that the proffered expert has sufficient expertise to aid the jury in the area of his competence.
2. A non-eyewitness expert qualified to testify as to speed based on skidmarks alone is not thereby qualified to testify as to speed of a vehicle based on skidmarks plus physical damage to the vehicles involved in a collision.
3. Establishment of foundation for expert testimony as to speed, based on both skidmarks and crash damage, must include proof that such determination of speed is scientifically possible and that the witness is sufficiently familiar with the method of doing so to be accepted as an expert in the field.
4. Whether a proffered expert is sufficiently qualified in a particular field of competence and whether the subject matter of his testimony is an appropriate subject for expert testimony are matters within the judicial discretion of the trial court, subject to reversal only in cases of abuse of discretion.
5. The granting of a new trial because of error in allowing an expert to give an opinion without sufficient foundation for such opinion was proper.
6. An order granting a new trial is more readily affirmed than an order denying a new trial.

Appeal from the District Court of Morton County, the Honorable Norbert J. Muggli, Judge.
AFFIRMED.
Opinion of the Court by Vogel, J.
C. J. Schauss, Mandan, for plaintiff and appellee.
Conmy, Conmy, Rosenberg & Lucas, Bismarck, for defendant and appellant.

Stein v. Ohlhauser

Civil No. 8907

Vogel, Judge.

This is an appeal from an order granting a new trial to the plaintiff, Stein, on the basis of the trial court's decision that it erred in allowing in evidence the opinion testimony of an expert witness as to the speed of a motor vehicle, based on skidmarks and other factors, including physical damage to the vehicles involved in a collision.

Stein had the right-of-way at an intersection which was protected by a stop sign. Ohlhauser, the defendant, after having stopped at the stop sign, proceeded into

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the intersection and into the path of the Stein car. Ohlhauser claims that Stein was contributorily negligent because she was speeding and that this negligence was a proximate cause of the collision.

The case was tried to a jury, which returned a verdict in favor of Ohlhauser for a dismissal of Stein's complaint. The trial court granted a new trial on Stein's motion.

Ohlhauser had employed an expert, whose general qualifications to testify were not questioned. Objection was made to a hypothetical question asked him, the objection was overruled, and the expert witness testified that it was his opinion that Stein was traveling just over fifty-one miles per hour immediately prior to braking her vehicle at a point thirty-nine feet from the place where the collision occurred.

On the motion for new trial, the trial judge concluded that he had erred in permitting the expert witness to testify to the speed of the vehicle, where the determination was based not only on skidmarks but also on damage to the two vehicles. The court stated that using the physical damage to the vehicles as a factor in arriving at the opinion of speed was, in its opinion, not sound or reasonably scientific nor based on reasonable engineering certainty. The court relied upon the rule of Brugh v. Peterson, 183 Neb. 190, 159 N.W.2d 321, 29 A.L.R.3d 236 (1968), to the effect that an expert witness properly qualified may testify to minimum speed based on skidmarks alone, but not as to speed based on skidmarks and collision damage.

The speed limit at the point of the accident was twentyfive miles per hour. In testifying that the minimum speed of the Stein car was fifty-one miles per hour, the witness stated that his opinion "is based in part on the damage to the vehicles," and that in addition to the amount of speed necessary to have laid down thirty-nine feet of track, "the crash or impact damage to the vehicle or the vehicles in this case" enters into his opinion.

Aside from stating his general engineering background and qualifications to testify as to speed based on skidmarks alone (such as a determination of the coefficient of friction on the road in question), the following constitutes the entire specific testimony as to the qualifications of the witness to draw conclusions as to speed based on skidmarks plus damage to the vehicles, and as to the reliability of and scientific basis for such testimony in general:

> "Q. Now, how many accidents have you been involved in in reconstruction or analysis, Mr. Brena?
>
> "A. Quite a few. Not quite a hundred but it would be, I would say, between 50 and 100 to be conservative.
>
> "Q. Have you participated in any tests which involved the actual crushing of automobiles?

"A. Yes.

"Q. Where were those tests conducted?

"A. At the University of Minnesota.

"Q. How were they conducted?

"A. Well, you may have heard of Professor Jim Ryan who ran a series of tests on a national basis and having national interests at the University of Minnesota where he would pick up a vehicle by means of a crane and I think he was using a magnetic release but it would pick a car up and then drop it. Now, we can figure out just through free fall formula how fast that body is going to be traveling when it would hit a concrete or any surface when it would reach ground. Then it would only be necessary to hold it, so high, whatever the distance would be in order to approximate, let's say, five miles an hour, fifteen or twenty and these were run for a series of heights to approximate a, series of speeds to

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determine after the car had fallen how much damage resulted to the car at various speeds.

"Q. And coming on contact with any unyielding surface?

"A. Yes.

"Q. Is there a difference between that and two vehicles coming in contact?

"A. Yes. In that when two vehicles are in contact assuming them both to be in motion first, they do not have the rigidity of let's say the concrete pad on which the vehicles are dropped. Each one is subject in the case of a collision to the momentum of the other one, the impact, the force. There is an impulse when one body hits another body, this is an impulse, it's a force which acts for a period of time and at the same time this moving body has what is called momentum and this is the weight of the body times its velocity and this gives us a large value. Here the more weight the bigger the difference it makes so far as momentum is concerned but the effect of a car on a stationary object such as the side of a bridge or concrete slab or floor is far different because the floor or the side of a building is an unyielding surface whereas another car does yield.

"Q. Crushens [sic] in effect?

"A. It will in effect crushen [sic] it. It will absorb energy imparted from the other vehicle and that energy has a subsequent effect on the behavior of that car whereas the concrete does not, forgetting about the minute or little chips, but you do not move that concrete floor. It absorbs the energy so this again we are into the potential thing or kinetic energy when we drop this, there is a certain amount of energy that has to be dissipated. Since it is not absorbed by the concrete except that the temperature [is] raised a little bit, all of that has to be taken by the car itself and this shows up in deformed 'A' frames, the frame itself, engine, so on, fire wall, wheel wells, the body damage.

"Q. Is it correct to state that with a two vehicle collision a car in motion has a certain motion, a

portion of that energy is absorbed by braking, a portion of that energy is absorbed by the crushed collision between the two vehicles and a final position [sic] of that energy is absorbed by movement of vehicles after impact to the point where they come to rest?

"A. Yes, this is how the energy is dissipated in these areas."

It is apparent from the foregoing that the witness has not explained how he was "involved in" the reconstruction or analysis of fifty to one hundred accidents, nor does he explain the extent of his "participation" in the tests of Professor Ryan. These matters go to his individual qualifications. More serious, his own testimony clearly shows that the tests which constitute his experience and the basis for his claim of scientific reliability are not comparable to actual collisions. He admits that the tests do not prove how cars behave in actual accidents, because cars do not have the rigidity of concrete; on the contrary, they have a momentum which a concrete crash pad does not have, and they yield where concrete does not.

There is nothing in the record to show that there is any scientific way to determine speed from crash damage other than gross estimation, based to some extent on experience and judgment. Mr. Brena used a formula in his testimony (apparently placing it on the blackboard, and if computations were shown to the jury, they are not part of the record here), but the record indicates that the formula related to computing stopping distances from skidmarks only, and not from dissipation of energy by crashing into other vehicles.

Some of the testimony of the witness seems rather bizarre, as where he testified that it does not matter whether tests for

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coefficients of friction are conducted in July or in March, that tire tread design has no significant effect upon the determination of coefficient of friction, and, in fact, that a higher coefficient of friction will result from a bald tire than one that is treaded. Such testimony is in stark contrast to other expert data, such as Report 37 of the National Cooperative Highway Research Program on Tentative Skid-Resistance Requirements for Main Rural Highways, prepared by H. W. Kummer and W. E. Meyer, Department of Mechanical Engineering, The Pennsylvania State University, quoted in People v. Zimmerman, 385 Mich. 417, 189 N.W.2d 2591, 283 (1971):

"The foregoing discussion should be persuasive evidence of the necessity of identifying the test conditions under which friction data are obtained when dealing with either the adhesion or the hysteresis component. When pavement friction is measured with a rubber slider or by means of a slipping or skidding tire, adhesion and hysteresis generally occur together, because no pavement surface is so smooth as to eliminate hysteresis or so well lubricated as to render adhesion trivial. Under these circumstances it becomes mandatory to state the test conditions and assure their constancy throughout the test.

"The statement 'We measured a friction coefficient of 0.63' is basically meaningless if it is not accompanied by the following information:

"1. Surface characteristics, of which surface geometry (macro- and microscopic roughness of the mineral particles and/or binder) and the type and amount of lubricant are the most important.

"2. Rubber characteristics, of which the elastic and damping properties are the most important.

"3. Operational parameters; that is, load or pressure acting on the slider or tire, sliding speed, and temperature of both surface and rubber.

"One might object that obtaining all of these data is impractical in field tests. Although this is correct, it is also true that many currently available test results are of limited value precisely because it either was not realized that this additional information was needed or it was not possible to determine all of the pertinent parameters."

In view of the foregoing, we cannot find fault with the district court in conceding error in allowing the testimony of the witness as to speed at the moment of braking, nor can we fault the court for ordering a new trial.

The admissibility of testimony of so-called accidentreconstruction experts has been the subject of a number of court decisions. Reported cases involving estimates dependent on computations of speed based in part on the extent of collision damage have been less numerous than might be expected. See annotation, 29 A.L.R.3d 271-275. The lower court here relied largely on Brugh v. Peterson, supra, involving, as here, one vehicle striking another at right angles with both in motion. In Brugh, the expert determined the coefficient of friction of the road surface and testified to the minimum speed of travel of a vehicle making the skidmark in question without impact, and this was held proper, just as our lower court held that it was proper for Mr. Brena to testify that the plaintiff's vehicle traveling at twenty-five miles per hour would have left the skidmark of about twenty-five feet without impact. The Nebraska court, however, held that the expert opinion as to speed based in part on crash damage "depends upon the resolution of so many variables that it is, in effect, a statement of a possibility. Under the circumstances in this case the expert testimony was neither necessary or advisable as an aid to the jury." The court held that the expert's testimony "should have been confined to speed based upon skid marks only."

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In People v. Zimmerman, supra, the testimony of an expert was relied upon to establish speed in a negligent homicide prosecution. In a unanimous decision (but supported by three opinions) the Michigan court held that the expert had not established that he was sufficiently qualified to testify as to speed based on skidmarks plus vehicle damage and (in the phrase of Justice Williams) that the "state of the art" was not shown to be sufficiently advanced to allow the kind of evidence offered.

The lack of proof of experimental data to show "state of the art" and the lack of proof of the witness's knowledge of experiments to verify his conclusion is in sharp contrast with the facts in Holecek v. Janke, 171 N.W.2d 94 (N.D. 1969), where the expert established his familiarity with experiments under controlled conditions to verify his conclusion as to the question under consideration, the force exerted by a collision upon the head of the driver. The testimony in the instant case might have been admissible if the expert had testified to familiarity with experiments under controlled conditions verifying the speed at which vehicular damage similar to that suffered by the vehicles here involved had occurred. There was no such foundation here.

In Serbousek v. Stockman Motors, Inc., 106 N.W.2d 879 (N.D. 1961). testimony was admitted as to speed based on skidmarks, the weight of the vehicles, and the distance they were moved by the impact, but the question of admissibility of the testimony was not raised in this court where there were "no challenges to the instructions of the court or rulings on the admission of evidence."

In Armstrong v. Miller, 189 N.W.2d 688 (N.D. 1971), we affirmed the trial court's refusal to allow

testimony as to an experiment relative to braking distances and skidmarks.

By affirming the order granting the new trial, we do not mean to say that it is impossible to establish that the "state of the art" is such that reliable estimates of speed can be derived from computations based on crash damage. However, it was not established here and has not been established in any case in this jurisdiction. (Perhaps it can be established upon a retrial.) Nor do we imply that the necessities of certain cases, such as a lack of eyewitnesses, might not call for a relaxation of standards in some cases. (Here, there were three eyewitnesses, the two drivers involved and one other person.) Nor do we suggest narrowing the range of discretion of trial judges in ruling on admissibility of expert testimony. And we do not mean to cast any doubt whatever on the admissibility of testimony of eyewitnesses as to speed or to suggest that our ruling should have any bearing on the entirely different question of the admissibility of estimates of speed by persons with entirely different methods of acquiring expertise in the field, such as highway patrolmen or policemen.

We hold that the testimony in this case as to speed based in part upon crash damage lacked sufficient foundation, both as to a scientific basis for the testimony and the qualifications of the witness to testify on the subject, and that the trial court correctly granted a new trial.

On the latter point, we note that we have recently held that new trials may be granted on less stringent criteria than judgments notwithstanding the verdict or directed verdicts [Nokota Feeds, Inc. v. State Bank of Lakota, 210 N.W.2d 182 (N.D. 1973)), and we have long held that we will more readily affirm a granting of a new trial than a denial of one. Linington v. McLean County, 146 N.W.2d 45 (N.D. 1966), and cases cited; Pocta v. Kleppe Corp., 154 N.W.2d 177 (N.D. 1967).

We are aware that there is a tendency toward allowing more, rather than less, expert testimony, as indicated by Rules 702 and 703 of the Proposed Rules

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of Evidence for the United States Courts and Magistrates. Yet the test, even under such liberalized rules, still is whether the specialized testimony will assist the trier of fact to understand the evidence or to determine a fact in issue and whether the witness is qualified as an expert. These are matters for the trial judge to determine, and where, as here, he determines that the evidence should not be admitted, we should agree unless his discretion is abused. Armstrong v. Miller, supra; Fisher v. Suko, 111 N.W.2d 360 (N.D. 1961). It should make no difference that the trial court made its determination belatedly, after the trial had ended, by holding that it had erred and that a new trial should be granted in the interests of justice. See Pocta v. Kleppe Corp., supra.

Even under the broadest and most generous allowance of the use of expert witnesses, there still must be a point at which their testimony is excluded. Even under the liberalized proposed Federal rules, the testimony of the expert here should be excluded. It is not enough to simply claim that a man is an expert and that the subject matter of his testimony is one

calling for expert testimony. No trial judge should yield to a litigant's insistance that he be allowed to use an expert on witchcraft or water-well dowsing or astrology, at least until it is established that the reliability of such testimony is accepted by the scientific community and the courts, nor should a witness be allowed to testify as an expert until he has been shown to have some degree of expertise in the field in which he is to testify. Otherwise, the jury is faced with an appearance of exactitude and an illusion of authority which may be more confusing than helpful. See People v. Zimmerman, supra; Brugh v. Peterson, supra; and Kleinsasser

v. Gross, 80 S.D. 631, 129 N.W.2d 717 (1964), at 721, where Presiding Judge (now Chief Justice) Biegelmeier said, in words pertinent here:

> "The expert's testimony could have been dispensed with and included as argument to the jury by defendant's attorney based on the photographs and other evidence. Admitting it, with his explanations, reasons and conclusions, in effect gave defendant two arguments to the jury, one by a sworn expert and one by his counsel."

The order granting the new trial is affirmed.

Robert Vogel
Ralph J. Erickstad, C.J.
William L. Paulson
Harvey B. Knudson
Obert C. Teigen

Judge Vogel not being a member of the Court at the time of submission of this case participated on the briefs filed.